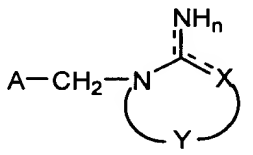
Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) ~~An activator~~ Compounds useful as activators for α4β2 nicotinic acetylcholine receptors ~~containing, as active ingredient, a heterocyclic compound~~ represented by formula (I):



(I)

wherein:

A is a phenyl group which is optionally substituted by one or more ~~times by~~ groups selected from the group consisting of C_1-C_4 alkyl ~~group~~ groups, halogen ~~atom~~ atoms, nitro ~~group~~ groups ~~or~~ and cyano ~~group~~ groups; or a heterocyclic group selected from the group consisting of thiophene, furan, pyran, pyrrole, pyrazole, pyridine, pyrimidine, pyrazine, pyridazine, imidazole, oxazole, isoxazole, thiazole, isothiazole, quinoline, isoquinoline, azaindole and tetrahydropyrimidine group, which is optionally substituted one or more times by C_1-C_4 alkyl group, or halogen atom;

the dotted line shows either the presence or absence of a bond;

n is 1 or 2; and

the group -Y-X- is -CH=C(R^8)-N= or -CH=C(R^9)-CH=N- (in which, R^8 and R^9 are a hydrogen atom; or a phenyl group which is optionally substituted one or more times by C_1-C_4 alkyl group, halogen atom, nitro group, or cyano group);

or pharmaceutically acceptable salts thereof.

2-3 (Cancelled)

4. (Currently Amended) A ~~therapeutic agent~~ pharmaceutical composition ~~for treating neurodegenerative disease, dementia, motor ataxia, and neuropathy and mental disease~~ comprising an effective amount of ~~the activator for α4β2 nicotinic acetylcholine receptors~~ a compound as claimed in claim 1 ~~or 2~~ and a pharmaceutically acceptable carrier or excipient.

5-7 (Cancelled)

8. (Currently amended) A method of activating α4β2 nicotinic acetylcholine receptors comprising administering an effective amount of ~~α4β2 nicotinic acetylcholine~~ a compound as claimed in claim 1 or pharmaceutically acceptable salts thereof.

9. (Cancelled)

10. (Currently Amended) ~~An~~ A pharmaceutical composition ~~activator for α4β2 nicotinic acetylcholine receptors containing~~ comprising one or more compounds claimed in claim 18 or pharmaceutically acceptable salts thereof as an active ingredient and a pharmaceutically acceptable carrier or excipient.

11-12 (Cancelled)

13. (Currently amended) A composition ~~for treating neurodegenerative disease, dementia, motor ataxia, and neuropathy and mental disease~~ as claimed in claim 10, comprising an effective amount of the one or more compounds as an activator for α4β2 nicotinic acetylcholine receptors ~~claimed in claim 10 or 11~~ and a pharmaceutically acceptable carrier or excipient.

14-16 (Cancelled)

17. (Currently amendeed) A method of activating α4β2 nicotinic acetylcholine receptors comprising administering an effective amount of ~~α4β2 nicotinic acetylcholine~~ a compound as claimed in claim 18 or pharmaceutically acceptable salts thereof.

18. (Currently amended) A compound as claimed in claim 1, selected from the group consisting of:

1-(6-chloro-3-pyridyl) methyl-2-imino-5-phenyl-1,2-dihydropyrimidine;

2-amino-1-(2-chloro-5-thiazolyl) methylimidazole;

2-amino-1-(6-chloro-3-pyridyl)methyl-4, 5-dimethylimidazole;

2-amino-1-(5-pyrimidyl)methylmidazole;

2-amino-1-(6-chloro-3-pyridyl)methyl-4-methylimidazole;

2-amino-1-(5,6 -dichloro-3-pyridyl)methylimidazole;

2-amino-1-(3-pyridyl)methylimidazole;

2-amino-1-(6-methyl-3-pyridyl)methylimidazole;

2-amino-1-(4-chlorobenzyl)imidazole; and

2-amino-1-(7-aza-3-indolyl)methylimidazole;

or a pharmaceutically acceptable salt thereof

19. (New) A method of activating α4β2 nicotinic acetylcholine receptors according to claim 8 or 17, wherein said compound is administered orally and said effective amount is about 0.001-1,000 mg/kg of body weight.

20. (New) A method of activating α4β2 nicotinic acetylcholine receptors according to claim 19, wherein said effective amount is about 0.01-100 mg/kg of body weight.

21. (New) A method of activating α4β2 nicotinic acetylcholine receptors according to claim 20, wherein said effective amount is about 0.1-10 mg/kg of body weight.

22. (New) A method of activating α4β2 nicotinic acetylcholine receptors according to claim 8 or 17, wherein said compound is administered parenterally and said effective amount is about 0.00001-10 mg/kg of body weight.

23. (New) A method of activating α4β2 nicotinic acetylcholine receptors according to claim 22, wherein said effective amount is about 0.0001-1 mg/kg of body weight.

24. (New) A method of activating α4β2 nicotinic acetylcholine receptors according to claim 23, wherein said effective amount is about 0.001-0.1 mg/kg of body weight.

25. (New) A method of activating α4β2 nicotinic acetylcholine receptors as claimed in claim 8 or 17, for treating cerebral circulation diseases.

26. (New) A method of activating α4β2 nicotinic acetylcholine receptors as claimed in claim 8 or 17, for treating neurodegenerative disease, dementia, motor ataxia, and neuropathy and mental disease.

27. (New) The method of activating α4β2 nicotinic acetylcholine receptors according to claim 26, wherein said neurodegenerative disease is Alzheimer's disease or Parkinson's disease, said dementia is cerebrovascular

dementia, said motor ataxia is Tourette's syndrome, and said neuropathy and mental disease is neurosis during chronic cerebral infarction stage, anxiety or schizophrenia.

28. (New) A method of activating α4β2 nicotinic acetylcholine receptors as claimed in claim 8 or 17 for improving the cerebral metabolism, neurotransmission functional disorder and memory disorder, for protecting brain, or having analgesic effect.

29. (New) A method of activating α4β2 nicotinic acetylcholine receptors as claimed in claim 8 or 17, for treating inflammatory intestinal diseases.